In the claims:

1. A method of updating covariance of a signal in a sequential manner comprising the steps of:

scaling the covariance of the signals by a scaling factor;

updating the scaling factor based on the signal to be recognized;

updating the scaling matrix each time new data of the signal is available; and

calculating a new scaling factor by adding a correction item to a previous scaling factor.

2. The method of claim 1 wherein the signal comprises a speech signal.
3. The method of claim 1 wherein the scaling factor is a scaling matrix and could be any matrix that ensures the scaled matrix is a valid covariance.
4. The method of claim 1 wherein the new available data of the signals could be based on any length.
5. The method of claim 1 wherein the new available data of the signals could be a frame.
6. The method of claim 1 wherein the new available data of the signals could be an utterance.
7. The method of claim 1 wherein the new available data of the signals could be a fixed time period.
8. The method of claim 1 wherein the new available data could be every 10 minutes of a speech signal.
9. The correction of claim 1 wherein the correction is the product of any sequence whose limit is zero, whose summation is infinity and whose square

summation is not infinity and a summation of quantities weighted by a probability.